Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for distributing candidate motion vectors, the method comprising:

dividing a picture frame into a plurality of segments using a ~~first component of a motion estimation module~~ processor, each segment comprising a plurality of pixel blocks;

measuring local motion complexity for each segment using ~~a second component of a motion estimation module~~ the processor; and

assigning a number of candidate motion vectors to pixel blocks within each segment based on the measured local motion complexity using ~~a third component of a motion estimation module~~ the processor, wherein the number of candidate motion vectors assigned to pixel blocks within one of the segments is different from the number of candidate motion vectors assigned to pixels blocks within another one of the segments.

2. (Previously Presented) The method of claim 1, wherein the step of measuring comprises:

determining a sum-of-absolute differences between pixel blocks of the picture frame and corresponding pixel blocks of an adjacent frame; and

summing the measured sum-of-absolute differences associated with of pixel blocks within each segment.

3. (Previously Presented) The method of claim 2, wherein the step of assigning comprises using a distribution function configured to assign the number of candidate vectors based on the measured local motion complexity of each segment.

4. (Original) The method of claim 3, wherein the distribution function is based on a maximum, minimum and average of the measured sum-of-absolute differences of the segments.

5. (Previously Presented) The method of claim 4, wherein the distribution function is further based on predetermined values for a maximum, minimum and average number of candidate vectors per block.

6. (Previously Presented) The method of claim 1, further comprising performing motion estimation on the pixel blocks using the number of candidate vectors assigned to each pixel block.

7. (Currently Amended) A system for distributing candidate vectors, the system comprising a processor configured for:

~~a first microprocessor that divides~~ dividing a picture frame into a plurality of segments, each segment comprising a plurality of pixel blocks;

~~means for~~ measuring local motion complexity for each segment; and

~~a second microprocessor that assignes~~ assigning a number of candidate motion vectors to pixel blocks within each segment based on the measured local motion complexity, wherein the number of candidate motion vectors assigned to pixel blocks within one of the segments is different from the number of candidate motion vectors assigned to pixels blocks within another one of the segments.

8. (Currently Amended) The system of claim 7, wherein the ~~means for~~ measuring comprises:

~~means for~~ determining a sum-of-absolute differences between pixel blocks of the picture frame and corresponding pixel blocks of an adjacent frame; and

~~means for~~ summing the measured sum-of-absolute differences associated with of pixel blocks within each segment.

9. (Currently Amended) The system of claim 8, wherein the ~~means for~~ assigning includes using ~~uses~~ a distribution function configured to assign the number of candidate vectors based on the measured local motion complexity of each segment.

10. (Original) The system of claim 9, wherein the distribution function is based on a maximum, minimum and average of the measured sum-of-absolute differences of the segments.

11. (Previously Presented) The system of claim 10, wherein the distribution function is further based on predetermined values for a maximum, minimum and average number of candidate vectors per block.

12. (Currently Amended) The system of claim 7, ~~further comprising means~~ the processor is further configured for performing motion estimation on the pixel blocks using the number of candidate vectors assigned to each pixel block.